

IN THE CLAIMS:

1. (Previously Presented) A light device comprising:  
a light source;  
a concave reflector;  
a lens projection system; and  
a collecting lens between said light source and said reflector, wherein said collecting lens is movable along an optical axis relative to said light source and said reflector;  
said light source, reflector and lens system being substantially aligned relative to said optical axis such that a light beam emitting from said device is collimated into a substantially parallel light beam having a diameter less than the diameter of said reflector.
2. (Canceled)
3. (Canceled)
4. (Original) A light source as set forth in Claim 1, wherein said collecting lens is a biconvex lens.
5. (Canceled)
6. (Original) A light source as set forth in Claim 1, wherein said light source is located substantially at a focal point of said reflector.
7. (Currently Amended) A light source as set forth in Claim 1, wherein said collecting lens has a focal length  $\phi f_l$  that is between about 1.25 and about 2.0 times the a focal length,  $f_3$ , of said reflector.
8. (Currently Amended) A light source as set forth in Claim 1, wherein said collecting lens is disposed a first distance,  $d_1$ , from said source relative to said optical axis and said reflector is disposed a second distance,  $d_2$ , from said source relative to said optical axis, where the first distance is at least one-half the second distance.  $d_1 \geq \frac{1}{2}d_2$ .
9. (Currently Amended) A light source as set forth in Claim 1, wherein said reflector has a focal length,  $f_r$ , and said collecting lens is disposed at a distance,  $d$ , from said reflector relative to said optical axis, where the distance is between  $\frac{1}{4}$  and  $\frac{1}{2}$  of the focal length of the reflector.  $0.25f_r \leq d \leq 0.5f_r$ .
10. (Original) A light source as set forth in Claim 1, where a diameter of said collecting lens is at least as great as a diameter of said reflector.

11. (Canceled)

12. (Original) A light source as set forth in Claim 1, further comprising a diaphragm disposed between said source and said lens projection system.

13. (Original) A light source as set forth in Claim 12, wherein said diaphragm has an aperture dimensioned to minimize transmission of unreflected light along said optical axis towards said lens projection system, where said unreflected light is light transmitted directly from said source free from reflection by said reflector.

14-23. (Canceled).

24. (Previously Presented) A light device comprising:  
 a light source;  
 a concave reflector;  
 a lens projection system;  
 said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, wherein said collecting lens is movable along said optical axis relative to said light source and said reflector.

25. (Previously Presented) A light source as set forth in Claim 24, wherein said collecting lens is a biconvex lens.

26. (Currently Amended) A light source as set forth in Claim 24, wherein said reflector has a focal length  $-f_1$  and said lens projection system and said reflector are separated by a distance that is at least 1.5 times the focal length  $-d_1$ , where  $-d \geq 1.5f_1$ .

27. (Currently Amended) A light source as set forth in Claim 24, wherein said collecting lens has a first focal length of  $f_1$  and said reflector has a second focal length  $-f_2$ , where the second focal length is between 1.25 and 2.0 time the first focal length.  $1.25f_1 \leq f_2 \leq 2.0f_1$ .

28. (Currently Amended) A light source as set forth in Claim 24, wherein said collecting lens is disposed a first distance  $d_1$  from said source relative to said optical axis and said reflector is disposed a second distance  $-d_2$  from said source relative to said optical axis, where the first distance is at least  $\frac{1}{2}$  of the second distance.  $-d_1 \geq \frac{1}{2}d_2$ .

29. (Currently Amended) A light source as set forth in Claim 24, wherein said reflector has a focal length  $-f_1$  and said collecting lens is disposed at a distance  $-d_1$  from said reflector

relative to said optical axis, where the distance is between  $\frac{1}{4}$  and  $\frac{1}{2}$  of the focal length of the reflector.  $-0.25f \leq d \leq 0.5f$ .

30. (Currently Amended) A light device comprising:

a light source;

a concave reflector;

a lens projection system;

said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, wherein said collecting lens is disposed a first distance  $-d_1$  from said source relative to said optical axis and said reflector is disposed a second distance  $-d_2$  from said source relative to said optical axis, where the first distance is at least  $\frac{1}{2}$  of the second distance.  $d_1 \geq \frac{1}{2}d_2$ .

31. (Currently Amended) A light source as set forth in Claim 30, wherein said collecting lens has a first focal length of  $f_1$  and said reflector has a second focal length  $-f_2$ , where the first focal length is between 1.25 and 2.0 times the second focal length.  $-1.25f_2 \leq f_1 \leq 2.0f_2$ .

32. (Currently Amended) A light source as set forth in Claim 30, wherein said reflector has a focal length  $-f_2$ , and said lens projection system and said reflector are separated by a distance  $-d_3$  of at least 1.5 times the focal length of the reflector, where  $-d_3 \geq 1.5f_2$ .

33. (Currently Amended) A light source as set forth in Claim 30, wherein said reflector has a focal length  $-f_2$ , and said collecting lens is disposed at said distance  $-d_4$  from said reflector relative to said optical axis, where the distance is between  $\frac{1}{4}$  and  $\frac{1}{2}$  if the focal length of the reflector.  $0.25f_2 \leq d_4 \leq 0.5f_2$ .

34. (Currently Amended) A light device comprising:

a light source;

a concave reflector having a focal length  $-f_2$ ;

a lens projection system;

said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens disposed at a distance  $-d_5$  from said reflector relative to said optical axis, where the distance is between  $\frac{1}{4}$  and  $\frac{1}{2}$  of the focal length of the reflector.  $0.25f_2 \leq d_5 \leq 0.5f_2$  and

wherein said collecting lens is disposed between said light source and said reflector.

35. (Currently Amended) A light source as set forth in Claim 34, wherein said lens projection system and said reflector are separated by a distance of at least 1.5 times the focal length of the reflector,  $d_2 \geq 1.5f$ .

36. (Currently Amended) A light source as set forth in Claim 34, wherein said collecting lens has a focal length that is between 1.25 and 2.0 times the focal length of the reflector,  $f_1$ , where  $1.25f \leq f_1 \leq 2.0f$ .

37. (Currently Amended) A light source as set forth in Claim 34, wherein said collecting lens is disposed a first distance  $d_3$  from said source relative to said optical axis and said reflector is disposed a second distance  $d_4$  from said source relative to said optical axis, the first distance is at least 1/2 of the second distance, where  $d_1 \geq 0.5d_4$ .

38. (Currently Amended) A light device comprising:

a light source;

a concave reflector having a first focal length  $f_1$ ;

a lens projection system;

said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, said collecting lens having a second focal length  $f_2$ , that is between about 1.25 and about 2.0 times the first focal length  $f_1$  of said reflector.

39. (Currently Amended) A light source as set forth in Claim 38, wherein said lens projection system and said reflector are separated by a distance that is at least 1.5 times the first focal length,  $d_1$ , where  $d_1 \geq 1.5f_1$ .

40. (Currently Amended) A light source as set forth in Claim 38, wherein said light source is located substantially at a focal point of said reflector.

41. (Currently Amended) A light source as set forth in Claim 38, wherein said collecting lens is disposed a first distance  $d_2$  from said source relative to said optical axis and said reflector is disposed a second distance  $d_3$  from said source relative to said optical axis, where the first distance is at least 1/2 of the second distance,  $d_2 \geq 0.5d_3$ .

42. (Currently Amended) A light source as set forth in Claim 38, wherein said collecting

lens is disposed at a distance,  $d_4$ , from said reflector relative to said optical axis, where the distance is between  $\frac{1}{4}$  and  $\frac{1}{2}$  of the first focal length.  $0.25 \cdot f_1 \leq d_4 \leq 0.5 \cdot f_1$ .